MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS SECTION

November 2003

RESIDENTIAL, COLONIAL POST-TOP, SEMI CUT-OFF, TYPE III DISTRIBUTION, STYLE LUMINAIRE

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of colonial post-top, semi cut-off, type III distribution, style luminaire. This luminaire is intended for use on or with the black fiberglass pole. These colonial post-top, semi cut-off, type III distribution, style luminaires are intended for use along residential roadways, walkways, and tunnels throughout Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and attached drawings.

2) DESCRIPTION

The residential, colonial post-top, type III distribution, style luminaire is made of a cast aluminum base with an aluminum reflector installed in the canopy.

Each streetlight luminaire shall include the following:

a) Cast aluminum housing and hinged top canopy;
b) 120 volt ballast;
c) Lamp with Mogul style base socket;
d) NEMA standard photoelectric control receptacle on the top cover of the luminaire;
e) NEMA multi-volt standard photocell;
f) Acrylic or Polycarbonate resin refractor side panels (lens);
g) Internal aluminum reflector (Type III);
h) All necessary hardware required for mounting on fiberglass poles, as specified.

3) DESIGN CRITERIA

3.1) AASHTO Standards

The luminaire shall meet the requirements of American Association of State Highway and Transportation Officials (AASHTO) Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

3.2) Shape and Minimum Size

a) The luminaire shall be of a trapezoidal shape. The minimum size for the luminaire shall 40.0 inches (sum of the length plus height), when viewed from the side.

b) The luminaire shall be suitable to accommodate either 70 watt, 100 watt, or 150 watt, High Pressure Sodium Vapor (HPSV) ballast and lamp.

3.3 Effective Projected Area (EPA)

The luminaire shall have a maximum estimated allowable EPA for the luminaire of three (3) +/- square feet.

3.4 Finish

The luminaire shall have a black polyester powder coat finish. During the finishing process, all critical openings shall be plugged to prevent contamination of the threads or reduction of other critical openings.

4) MATERIALS

4.1 Housing

The luminaire shall consist of a water tight housing fabricated from die-cast aluminum with a gasketed die-cast aluminum canopy. The canopy shall be hinged on one side and secured on the opposite side with a captive stainless steel screw. All castings used to fabricate the luminaire housing shall be clean and smooth with details defined and true to pattern. The housing shall be suitable to accommodate 70 watt, 100 watt, or 150 watt High Pressure Sodium Vapor (HPSV) ballast and lamp.

4.2 Ballast

The ballast shall be mounted to facilitate easy removal for maintenance or conversion to a different ballast. All electrical connections shall be polarized and of plug-in design. The ballast shall be wired to receive 120 volt AC current. The ballast shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees.

4.3 Lamp

The luminaire may be used with any of three (3) lamp wattages as follows:

ANSI Code - 70 watt (HPSV), with Mogul base socket;
ANSI Code - 100 watt (HPSV), with Mogul base socket;
ANSI Code - 150 watt (HPSV), with Mogul base socket; or as specified.

4.4 Photoelectric Cell

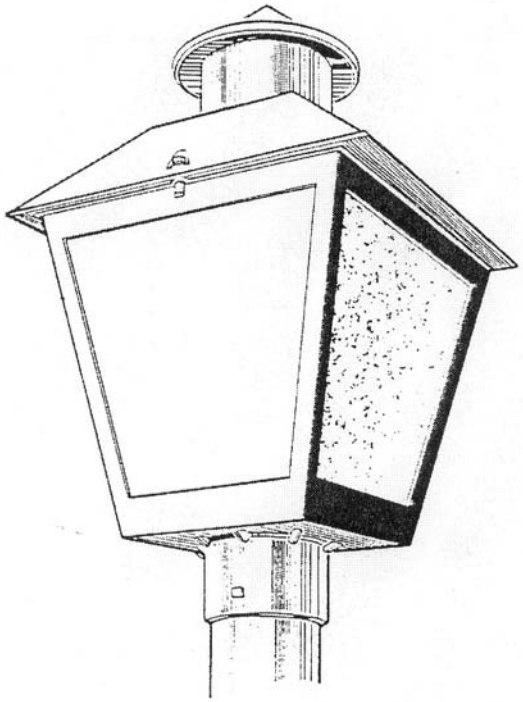
The photocell receptacle shall be mounted on the top of the hinged canopy. The photocell shall be of the NEMA twist-lock type and shall include a cover for the photocell.

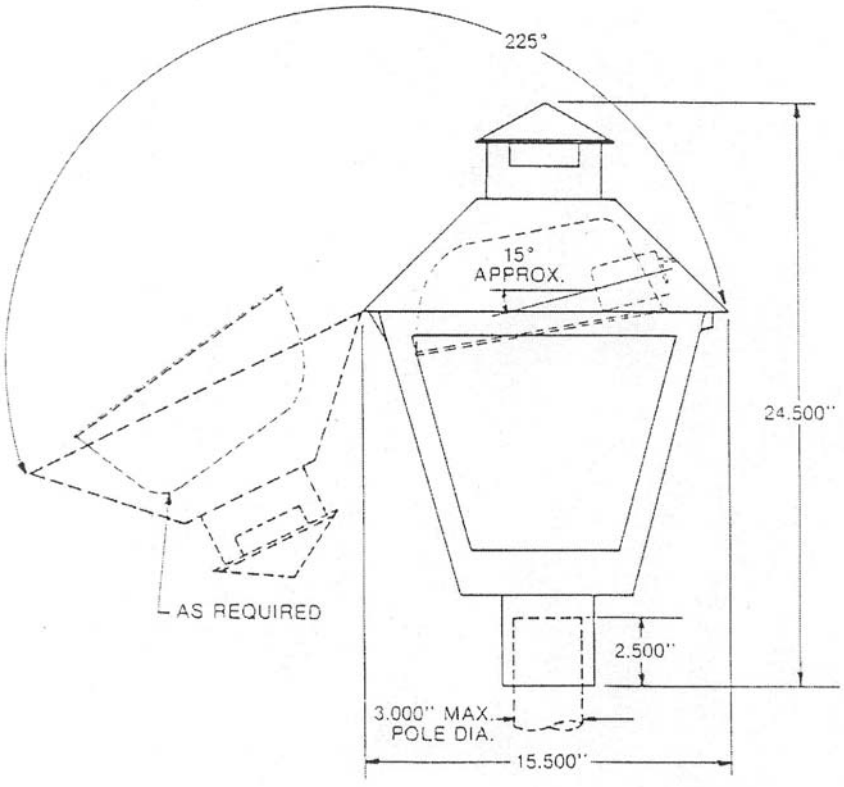
4.5 Side refractor panels

The luminaire shall be equipped with acrylic or polycarbonate resin refractor panels, with spring loaded retainer clips to hold refractor panels.

4.6 Reflector

The luminaire shall contain a one-piece aluminum sheet reflector, mounted in the canopy. The reflector shall have a type III distribution pattern, with a anodized process finish (“Akzak” or equivalent type anodic process).




225°
15°
APPROX.
24.500"
AS REQUIRED
2.500"
3.000" MAX.
POLE DIA.
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